

Tennessee Pollution Prevention Partnership Success Story



James H. Quillen
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Mercury-Containing Medical Devices Removed From Service

The Member

James H. Quillen VA Medical Center is a tertiary care facility providing a full range of patient care services, with state-of-the-art technology as well as education and research. Comprehensive health care is provided through primary care, tertiary care, and long-term care in areas of medicine, surgery, psychiatry, physical medicine and rehabilitation, neurology, oncology, dentistry, geriatrics, and extended care. In addition to providing acute care, the James H. Quillen VA Medical Center offers geriatric and rehabilitation services through its 120-bed Nursing Home Care Unit. The facility also operates a 348-bed Domiciliary that offers a variety of treatment options, which includes a Homeless Inpatient Treatment Program and Homeless Outreach. James H. Quillen VA Medical Center has an active affiliation with the James H. Quillen College of Medicine at East Tennessee State University. The medical school is housed on the grounds of the VA Medical Center and is utilizing the property through Enhanced-Use Leasing agreement. Over 300 University residents, interns, and students are trained at the James H. Quillen VA Medical Center each year. There are also nursing student affiliations with East Tennessee State University, University of Tennessee, Vanderbilt University and five other nursing schools. There are other major university affiliations with our medical center involving dentistry, pharmacy, social work, and psychology. A U.S. National Cemetery is also located on the grounds of the VA.

The Story

Historically, mercury has been a major component in equipment used in the medical field because of the reliability of readings it provides. When new “mercury free” products were approved for use and became commercially available, the James H. Quillen

VA Medical Center began incorporating them into the station in place of their mercury-containing counterparts, and even instituted a policy for mercury elimination. When the James H. Quillen VA Medical Center conducted an audit of mercury-containing instruments, it identified thermometers, barometers, blood pressure sphygmomanometers as well as thermostats, ballasts and other measurement devices. A project was initiated in 2002 and completed in December 2005 to remove and replace, whenever practical, the former mercury-containing medical devices. Humans can be exposed to mercury by inhalation or ingestion. Mercury can also enter the body through contact with the skin. If mercury-containing instruments are broken, any of these routes of exposure could be completed. Exposure to any form of mercury on a repeated basis, or even from a single, very high exposure can lead to the disease of chronic mercury poisoning.

The Success

During 2002, '03, & '04, the James H. Quillen VA Medical Center established a baseline by removing and recycling an average of 45,330 grams of mercury per year through reduction of the above-identified devices. During 2005, the final year of the abatement, only 4,533 grams of mercury were located and removed.

The Pollution Prevented

Where products exist that have to date been technologically and economically developed for use in the medical field, mercury-containing instruments have been replaced at the James H. Quillen VA Medical Center. This mercury elimination project has provided 99.9% mercury elimination for a total of 140,523 grams of mercury during the four-year period.

December 2005

